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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,530	11/30/2001	Paul L. Master	QuickSilver Technology, I	6090

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EXAMINER	
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ART UNIT	**PAPER NUMBER**
2183	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/997,530	MASTER ET AL.	
	Examiner	Art Unit	
	Daniel Pan	2183	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03/05/06, 03/08/06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-143* is/are pending in the application.

4a) Of the above claim(s) *6* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-143* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *03/06/06*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Claims 1-5,7-143 are presented for examination. Claim 6 has been canceled.

1. Upon further review and consideration, the restriction requirements set forth in the last office action on 03/21/05 ahs been withdrawn. Since this action includes rejection to claims not previously discussed, it is a non-final action.

Applicant's arguments with respect to claims 1-5,7-143 have been considered but are moot in view of the new ground(s) of rejection. However, applicant's remarks regarding teaching of Wise will be reponded below :

In the remarks, applicant argued that :

a) Wise did not teach routing elements and did not teach any switching elemetns;

b) Wise did not teach the interconnect network comrpising both routing and switching , and did not teach self-routing .

As to a) above, Wise did not teach the routing elements as claimed. However, Baxter (newly cited art) taught routing elements (see the Interconnect Matrix in fig.1, see also the Interconnect Matrix for selectively routing in col.10, lines 26-38). The reason for obviousness will be given in this action below. AS to the switching elements , Wise's multiplexer circuit in fig.137 was a switching element.

As to b), see paragraph # 11 and 38 for the discussions of routing and switchng elements. AS to the self-routing , see also Baxter's fig.2 the memory storing the configuratin sets by the configuration directive in program.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. US 2003/0105949 . Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending claim 1 does not recite the fixed and differing computational elements as claimed in current claim 1. However, the copending claim 1 also recites the architectures were fixed and that the computational elements were heterogeneous (see copending claim 1, lines 7-15) . It would have been obvious to one of ordinary skill in the art to use fixed and differing computational elements as claimed because one of ordinary skill in the art should be able to recognize that the fixed architectures would have encompassed the fixed computational elements and that the heterogeneous computational elements could be applicable as differing computational elements for increase the compatibility for the system and for doing so, provide a reason for include the fixed and differing computational elements.

3. Claim 32 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 40 of copending Application No. US 2003/0105949 . Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending claim 40 does not recite the selective routing the configuration as claimed in current claim 32. However, the copending claim 40 also taught receiving the configuration information (see copending claim 40, lines 3-6) . It would have been obvious to one of ordinary skill in the art to use

fixed and differing computational elements as claimed because one of ordinary skill in the art should be able to recognize that the receiving of the configuration would have included the transfer of the data from a source to a destination, and that since the computational elements are heterogeneous, the routing to a selective destinations were desirable in order to enhance the information transfer , and in so, provide a reason for include the selective routing.

4. Claim 129 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 24 of copending Application No. US 2006/0031660 . Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 129 generic to the species of invention covered by claim 24 of the copending application. Thus, the generic invention is "anticipated" by the species of the patented invention. Cf., Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (holding that an earlier species disclosure in the prior art defeats any generic claim) . This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. In re Van Ornum, 686 F.2d 937, 944, 214 USPQ 761, 767 (CCPA 1982); Schneller , 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 1,23 are properly rejected under the doctrine of obviousness-type double patenting (see In re Goodman (CA FC) 29 USPQ2d 2010).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Claim 32 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 39 of patented Application 6,986,021. Although the conflicting claims are not identical, they are not patentably distinct from each other because the patented claim 39 does not recite the selective routing the configuration as claimed in current claim 32. However, the patented claim 39 also taught receiving the configuration information (see patented claim 39, lines 3-7) . It would have been obvious to one of ordinary skill in the art to use fixed and differing computational elements as claimed because one of ordinary skill in the art should be able to recognize that the receiving of the configuration would have included the transfer of the data from a source to a destination, and that since the computational elements are heterogeneous, the routing to a selective destinations were desirable in order to enhance the information transfer , and in so, provide a reason for include the selective routing.

6. Claim 1 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,986,021. Although the conflicting claims are not identical, they are not patentably distinct from each other because patented claim 1 does not recite the fixed and differing computational elements as claimed in current claim 1. However, the patented claim 1 also recites the architectures were fixed and that the computational elements were heterogeneous (see

patented claim 1, lines 9-25) . It would have been obvious to one of ordinary skill in the art to use fixed and differing computational elements as claimed because one of ordinary skill in the art should be able to recognize that the fixed architectures would have encompassed the fixed computational elements and that the heterogeneous computational elements could be applicable as differing computational elements for increase the compatibility for the system and for doing so, provide a reason for include the fixed and differing computational elements.

7. Claim 94 is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 87 of U.S. Patent No. 6,986,021. Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 94 is generic to the species of invention covered by claim 87 of the patent. The patented claim 87 recites the selective routing the configuration in deferring computational elements while the current claim 94 recites plurality of routing elements. Thus, the generic invention is "anticipated" by the species of the patented invention. Cf., Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (holding that an earlier species disclosure in the prior art defeats any generic claim) . This court's predecessor has held that, without a terminal disclaimer, the species claims preclude issuance of the generic application. In re Van Ornum, 686 F.2d 937, 944, 214 USPQ 761, 767 (CCPA 1982); Schneller , 397 F.2d at 354. Accordingly, absent a terminal disclaimer, claims 1,23 are properly rejected under the doctrine of obviousness-type double patenting (see In re Goodman (CA FC) 29 USPQ2d 2010).

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 32 , 63 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The reasons are given below.

9. As to claims 32,63, Claims 32,63 are not limited to tangible embodiments. In view of Applicant's disclosure, specification page 7 , lines 1-3,15,31, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., [wireless base station]) and intangible embodiments (e.g., [wireless link] [air interface]). See also page 9. line 31 [wireless interface], page 27, line 10 [download through other medium], page 27, lines 29,30 [wireless download]. As such, the claim is not limited to statutory subject matter and is therefore non-statutory. The invention is not restricted into the hardware. For example, the receiving and transmitting the configuration information and the routing of the data through the interconnect network could be done over the air interface, for example the wireless download, therefore, it is not concrete and tangible. The downloaded configuration

information can be in the form of frequency waves transmitted in the air space, therefore, it is directed to a non-statutory subject matter.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-5,7-15, 17, 18, 20,21,23,27-46, 48,49,,51-58, 62-76, 78-85, 89-99,101-128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wise (5,768,561) in view of Baxter (5,794,062).

11. As to newly amended claims 1,8, 17, 89, 90, 91, 92, Wise disclosed a system for adaptive configuration, the system comprising:

a) a first set of configuration information (see fig.137) , the first set of configuration information including a first subset of configuration information (see carry-save multiplier , carry save adder, carry save subtractor) and a second subset of configuration information (carry-save multiplier , carry save subtractor, carry save subtractor);

b) a plurality of heterogeneous computational elements, the plurality of heterogeneous computational elements including a first computational element (see resolving adder at y input) and a second computational element (see the d multiplier at x) , the first computational element having a first fixed architecture (adder) and the second computational element having a second fixed architecture (multiplier) , the first fixed architecture being different than the second fixed architecture; and

c) an interconnection network (see common block in fig.137) coupled to the plurality of heterogeneous computational elements, the interconnection network operative to configure the plurality of heterogeneous computational elements for a first functional mode x[3,4] of a plurality of functional modes, in response to the first subset of configuration information (see configuration carry-save multiplier, carry save adder, carry save subtractor in the common block), and the interconnection network further operative to reconfigure the plurality of heterogeneous computational elements for a second functional mode (x[2,5]) of the plurality of functional modes, in response to the second sub set of configuration information (see carry save multiplier, carry save subtractor, carry save subtractor) , the first functional mode (x[3,4]) being different than the second functional mode (x[2,5]);

d) a plurality of switching elements (see multiplexer circuit in fig.137).

12. Wise did not specifically show the memory for storing his first configuration a second configuration as claimed. However, Baxter taught a memory for storing s first configuration and a second configuration (see fig.4 34, fig.3A for detailed configuration

sets). It would have been obvious to one of ordinary skill in the art to use Baxter in Wise for including the a memory for storing the first configuration and a second configuration as claimed because the use of Baxter could provide Wise the ability to reuse the configuration information as stored in a memory, thereby increasing the adaptability for system , and because Wise also taught a memory map for mapping hardware resources into the memory address (see col.259, lines 10-25) , and that his multiplexed network (see interconnection common box in fig.137) showed the points at which needed to be stored (see col.262, lines 14-20), which was a suggestion of the desirability to save the configuration , such as the connections points, into a memory, and for doing so , provided a motivation. Wise also showed the storage of the configuration information (see the RAM organized into common control block in col.265, lines 43-53, see also the common control block in fig.137).

13. As to the matrix interconnected network coupled to plurality of matrices in claim 89 , Baxter also taught matrix interconnected network including the plurality of matrices (see fig.1, S machines, T machines, I/O T machines, I/O devices).

14. As to the newly amended claim 32, Wise also selectively routed his configuration information (se the multiplexed circuit configuration in fig.137). As the step for receiving and transmitting , see the input at x bus and output at the y bus .

15. As to claim 2, Wise also included a first system operating mode (see carry-save multiplier , carry save adder, carry save subtractor).

16. As to claim 3, Wise also included a second system operating mode (carry-save multiplier , carry save subtractor, carry save subtractor).

17. As to claim 4, wise also taught the first set of configuration information corresponds to a first system reconfiguration capacity (see the y[3,2] x[3,4] connection path in fig.137) and the second set of configuration information corresponds to a second system reconfiguration capacity (see the y[7,6] , x[2,5]) .

18. As to claim 5, see fig.137.

19. As to claim 7, Wise showed the storage of the configuration information (see the RAM organized into common control block in col.265, lines 43-53, see also the common control block in fig.137).

20. As to claim 9, The system of claim 1, wherein the first set of configuration information is stored in a machine-readable medium (see microprocessor read port in col.260, lines 32-35, see RAM in col.265, lines 43-53).

21. As to claims 10, 11, Wise also taught the transmission through an air interface (carrier waves, see col.4, lines 21-23) , and transmitted through a wireline interface (see telephone line in col.4, lines 13-14.

22. As to claims 12,13, Wise also taught configuration information embodied as a plurality of discrete information data packets (see Discrete cosine transform in col.4, lines 1-11 for background, see also the data packet in col.13, lines 53-57).

23. As to claim 14, Wise also taught memory, addition (see adder) , multiplication (see multiplier) , complex multiplication , subtraction (see subtractor) , configuration, reconfiguration, control, input, output (input and output) , and
field programmability (see dynamic adaptive configuration in col.6, lines 57-67, col.7, lines 1-12).

24. As to claim 15, Wise also included linear algorithmic operations (see col.4, lines 8-9), non-linear algorithmic operations (see the transforms), finite state machine operations (see state machine stages in col.30, lines 62-67, col.31, lines 1-4), controller operations, memory operations (see col.39, lines 35-57), and bit-level manipulations (see bit operation in col.40, lines 15-28).

25. As to claim 18, Wise was also operative to time and schedule the configuration and reconfiguration of the plurality of heterogeneous computational elements with

corresponding data (see the pipeline control of the algorithm and the control clock signals in col.262, lines 55-65).

26. As to claim 20, Wise also included second d plurality of heterogeneous elements configured for controller to direct and schedule the configuration of the first and second modes (see the clock control circuit at input in fig.141).

27. As to claim 21, Wise also included a second plurality of heterogeneous computational elements is further adapted to time and schedule the configuration and reconfiguration of the plurality of heterogeneous computational elements with corresponding data (see fig.141 the output clock latches).

28. As to claim 23. Wise did not explicitly show the mobile station having a plurality of operating modes. However, Wise in the background taught carrier waves by a transmitter (see carrier waves, see col.4, lines 21-23). Therefore, Wise must have included a mobile station.

29. As to claim 27, Wise also taught request for configuration information (seem the request in col.64, lines 34-50).

30. As to claims 28,29, 30, Wise also determined system reconfiguration capacity prior to utilizing the second set of configuration information to reconfigure for a second system operating mode (see the token information for reconfiguration in col.61, lines 5-22, see also the prediction filters to perform either filtering based on the token fig.17, col.69, lines 11-20).

31. As to claim 31, Wise also taught a first portion of the plurality of heterogeneous computational elements (see configuration carry-save multiplier , carry save adder, carry save subtractor in the common block) are operating in the first functional mode (x[3,4]) while a second portion of the plurality of heterogeneous computational elements (see carry save multiplier, carry save subtractor, carry save subtractor) are being configured for the second functional mode (x[2,5]) .

32. As to claims 32, 63, 93, 94, 98,101-103 Wise taught selectively switching the inputs and outputs (see inputs X and output Y in fig.137). Wise also taught receiving and transmitting configuration information (see the input at X and output at Y in fig.137). Wise did not specifically shoed the selectively routing trough his network data and first and second subsets of configuration to the plurality of the heterogeneous computational elements as claimed. However, Baxter taught selectively routing thought a network the configuration information (see the Interconnect Matrix in fig.1, see also the Interconnect Matrix for selectively routing in col.10,, lines 26-38). It would have been obvious to one of ordinary skill in the art to use Baxter in Wise for including the selectively routing the first and second subset of configurations as claimed because the use of Baxter could provide Wise the capability to reconfigure the processing elements

at a predefined set of selection, thereby increasing the flexibility of the configurations, and because Wise also taught his interconnection network (see the common box in 137 was a multiplexed circuit, see col.262, lines 14-19), which was a suggestion of the applicability of the selective routing, and for the above reasons , provided motivation.

33. As to selectively switching in claim 104, see multiplexer circuit in fig.137.

34. AS to claims 33, 34, 64,65,95, Wise also included a first set of configuration information including a first subset of configuration information (see carry-save multiplier , carry save adder, carry save subtractor) and a second subset of configuration information (carry-save multiplier , carry save subtractor, carry save subtractor);

35. As to claims 35, 66, wise also taught the first set of configuration information corresponds to a first system reconfiguration capacity (see the y[3,2] x[3,4] connection path in fig.137) and the second set of configuration information corresponds to a second system reconfiguration capacity (see the y[7,6] , x[2,5]) .

36. As to claims 36, 67, see fig.137, col.262, lines 14-20 , see the multiplexed circuit.

37. As to claims 37-40,68-70, Wise also showed the storage of the configuration information (see the RAM organized into common control block in col.265, lines 43-53, see also the common control block in fig.137 , for a machine-readable medium, see microprocessor read port in col.260, lines 32-35, see RAM in col.265, lines 43-53).

See also teaching of Baxter and the reasoning of obviousness in the paragraph above.

38. As to claims 41,42,71 72, , Wise also taught the transmission through an air interface (carrier waves, see col.4, lines 21-23) , and transmitted through a wireline interface (see telephone line in col.4, lines 13-14.

39. As to claims 43,44, 73,74, Wise also taught configuration information embodied as a plurality of discrete information data packets , or a data team (see Discrete cosine transform in col.4, lines 1-11 for background, see also the data packet in col.13, lines 53-57).

40. As to claims 45, 75,99, Wise also taught memory, addition (see adder) , multiplication (see multiplier) , complex multiplication , subtraction (see subtractor) , configuration, reconfiguration, control, input, output (input and output) , and field programmability (see dynamic adaptive configuration in col.6, lines 57-67, col.7, lines 1-12).

41. As to claims 46,76, 96, 97, Wise also included linear algorithmic operations (see col.4, lines 8-9), non-linear algorithmic operations (see the transforms), finite state machine operations (see state machine stages in col.30, lines 62-67, col.31, lines 1-4), controller operations, memory operations (see col.39, lines 35-57), and bit-level manipulations (see bit operation in col.40, lines 15-28).

42. As to claim 78, see Wise in the background taught carrier waves by a transmitter (see carrier waves, see col.4, lines 21-23).

43. As to claim 48, Wise also included second d plurality of heterogeneous elements configured for controller to direct and schedule the configuration of the first and second modes (see the clock control circuit at input in fig.141).

44. As to claim 49, Wise was also operative to time and schedule the configuration and reconfiguration of the plurality of heterogeneous computational elements with corresponding data (see the pipeline control of the algorithm and the control clock signals in col.262, lines 55-65).

45. As to claim 21, Wise also included a second plurality of heterogeneous computational elements is further adapted to time and schedule the configuration and reconfiguration of the plurality of heterogeneous computational elements with corresponding data (see fig.141 the output clock latches).

46. As to claim 51,52, Wise did not explicitly show the mobile station having a plurality of operating modes. However, Wise in the background taught carrier waves by a transmitter (see carrier waves, see col.4, lines 21-23). Therefore, Wise must have included a mobile station.

47. As to claims 53, 79, see servers in col.36, lines 14-19 in Baxter.

48. As to claims 54, 80, see the I/O T machines in fig.1.

49. As to claims 55, 85, Wise also taught request for configuration information (see the request in col.64, lines 34-50).

50. As to claims 56,57, Wise also determined system reconfiguration capacity prior to utilizing the second set of configuration information to reconfigure for a second system operating mode (see the token information for reconfiguration in col.61, lines 5-22, see also the prediction filters to perform either filtering based on the token fig.17, col.69, lines 11-20).

51. As to the integrated circuit in claims 58,81, Examiner holds that integrated circuit was already well known in the art.

52. As to claim 62, Wise also taught a first portion of the plurality of heterogeneous computational elements (see configuration carry-save multiplier , carry save adder, carry save subtractor in the common block) are operating in the first functional mode (x[3,4]) while a second portion of the plurality of heterogeneous computational elements (see carry save multiplier, carry save subtractor, carry save subtractor) are being configured for the second functional mode (x[2,5]) .

53. AS to claims 82-84, examiner holds that local area network and wide area net work were already known in the art.

54. As to claims 101,105, 115, Wise's also included differing computational elements (see carry save adder is different from carry save subtractor).

55. As to claims 102, 116, Wise also independently configured his computational elements (see each connection path in fig.137).

56. As to claims 103,106, 109,113, 114, 117, 122,. see selectively routing in Baxter and discussions of obviousness in paragraph above.

57. As to claims 104,118, 119, Wise also selectively switched his data to the plurality of computational elements (see multiplexed circuit in fig.137).

58. As to claims 107,108, 120, 121, Wise also provided a third mode (see the arithmetical functional modes set forth in the fig.137, see a third path at x input, see multiplexed circuit for selectively switching).

59. As to claim 110-111,112, 123, 124, Baxter also included a self-routing (see the reconfigurable information stored in the memory by the directives in fig.2).

60. As to claims 125,126, Wise also included the interface circuit (see the input at X and output at y in fiog.137). As to the selectively switch, see multiplexed circuit in fig.137), and selectively routing , see selectively routing in Baxter and discussions of obviousness in paragraph above.

61. As to claim 127, see multiplexer in fig.137.

62. As to the demultiplxers in clam 128, since no specific type of demultiplexers are being reflected into the claim, therefore, examiner holds that demultiplexers were already well known in the art.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

63. Claims 16,19, 22, 24-26, 47,50, 77, 100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wise (5,768,561) in view of Baxter (5,794,062) in view of Lee et al. (5,873,045).

64. As to claims 24, 25, 26, limitations of parent claims have been discussed in previous paragraphs, therefore, it will not be repeated herein. Wise did not specifically show the personal digital assistance, multimedia reception, and paging as clamed. However, Lee disclosed personal digital assistance, multimedia reception, mobile packet-based communication (e.g. see col.3, lines 2-16). It would have been obvious to one of ordinary skill in the art to use Lee in Wise for included the personal digital assistance, multimedia reception, and paging as clamed because the use of Lee could provide Wise the ability to accept information from different type of devices(e.g. the cellular devices), and it could be done by predefine the mobile devices of Lee (e.g. the pager , personal assistant) into the configuration file of Wise with modified control parameters (e.g. the R/W format of the specific device) so that the specific mobile device of Lee could be recognized by Wise, and because Wise also taught carrier waves transmitter (see col. col.4, lines 21-23), which was a suggestion of the demand

for including e mobile devices (e.g. the pager, or personal assistant), as taught by Lee , into Wise in order to provide the enhanced capability of the system in Wise, and for doing so, provided a motivation.

65. As to claims 16,19,22,47,50,77, 100, Wise did not specifically show the single bit stream of the configuration information as clamed. However, Lee disclosed a single bit stream of configuration information see the conversion into the single ended signal in col.8, lines 46-51). It would have been obvious to one of ordinary skill in the art to use Lee in Wise for including the single bit stream as claimed because the use of Lee could provide Wise the ability to adapt to different type of configuration information, therefore, increasing the capability of Wise to process a diverse set of configuration information, and Wise did disclose that his system was used for adapting to plurality of encoding standards (see col.1, lines 60-67), which was an indication of the need for including the conversion of the multi-standard encoding signals into a single integrated format in order to reduce the hardware space of the system, and therefore, provided a motivation.

66. Claims 59-61, 86-88 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wise (5,768,561) in view of Baxter (5,794,062) in view of Cohen et al. (6,005,943).

67. As to claims 59-61, 86-88, neither Wise nor Baxter specifically showed the decrypting the configuration , nor the authorization to receive the configuration as claimed. However, Cohen taught a decryptor and authorization of the configuration

(see fig.2, col.8, lines 5-52). It would have been obvious to one of ordinary skill in the art to use Cohen in Wise for including the decryption and authorization of the configuration as claimed because the use of Cohen could provide Wise the ability to accept the configuration information based on a predetermined set of requirements and restrictions, therefore increasing system security in Wise.

68. Claim 129 is rejected under 35 U.S.C. 102(b) as being anticipated by Wise (5,768,561).

69. As to claim 129, Wise taught :

a) first plurality of fixed and differing computational elements forming a first configurable architecture (see carry-save multiplier , carry save adder, carry save subtractor) ;

b) an interconnection network (see fig.137 common box) coupled to the first plurality of computational elements the interconnection network adapted to transfer data and first configuration to first plurality of computational elements.

70. Claim 130-143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wise (5,768,561) in view of Baxter (5,794,062)..

71. As to claims 130, 133, 137, 138, 139, 140-143, Wise taught selectively switching the inputs and outputs (see inputs X and output Y in fig.137). Wise also taught receiving and transmitting configuration information (see the input at X and

output at Y in fig.137). Wise did not specifically shoed the selectively routing trough his network data and first and second subsets of configuration to the plurality of the heterogeneous computational elements as claimed. However, Baxter taught selectively routing through a network the configuration information (see the Interconnect Matrix in fig.1, see also the Interconnect Matrix for selectively routing in col.10,, lines 26-38). It would have been obvious to one of ordinary skill in the art to use Baxter in Wise for including the selectively routing the first and second subset of configurations as claimed because the use of Baxter could provide Wise the capability to reconfigure the processing elements at a predefined set of selection, thereby increasing the flexibility of the configurations, and because Wise also taught his interconnection network (see the common box in 137 was a multiplexed circuit, see col.262, lines 14-19), which was a suggestion of the applicability of the selective routing, and for the above reasons , provided a motivation. For interface circuit , see the input bus at X and output bus at y .

72. As to claim 131, Wise also included a second plurality of computational elements (see carry-save multiplier , carry save subtractor, carry save subtractor).

73. As to claim 132, Wise also included second functional mode (x[2,5]) of the plurality of functional modes, in response to the second sub set of configuration information (see carry save multiplier, carry save subtractor, carry save subtractor) , the first functional mode (x[3,4]) in response to the first configuration.

74. As to claim 134, see a third path for a third mode in fig.137.

75. As to claims 135,136, Baxter also included a self-routing because it was directed to reconfigurable information stored in a memory by the configurations directives (see fig.2).

76. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Widergren et al. (4,302,775) is cited for the background teaching of the single bit stream configuration word with the respective function mode (e.g. see the single composite data stream in of the data with the col.23, lines 24-37).

b) Nosenchuck et al. (4,811,214) is cited for the teaching of the reconfigurable computational elements and memory for storing the configuration (see fig.2, fig.6m col.7, lines 54-68, col.8, lines 1-13).

c) Furuta et al. (6,281,703) is cited for the matrices of computational elements (see fig.4).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162.

The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

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21 Century Strategic Plan

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